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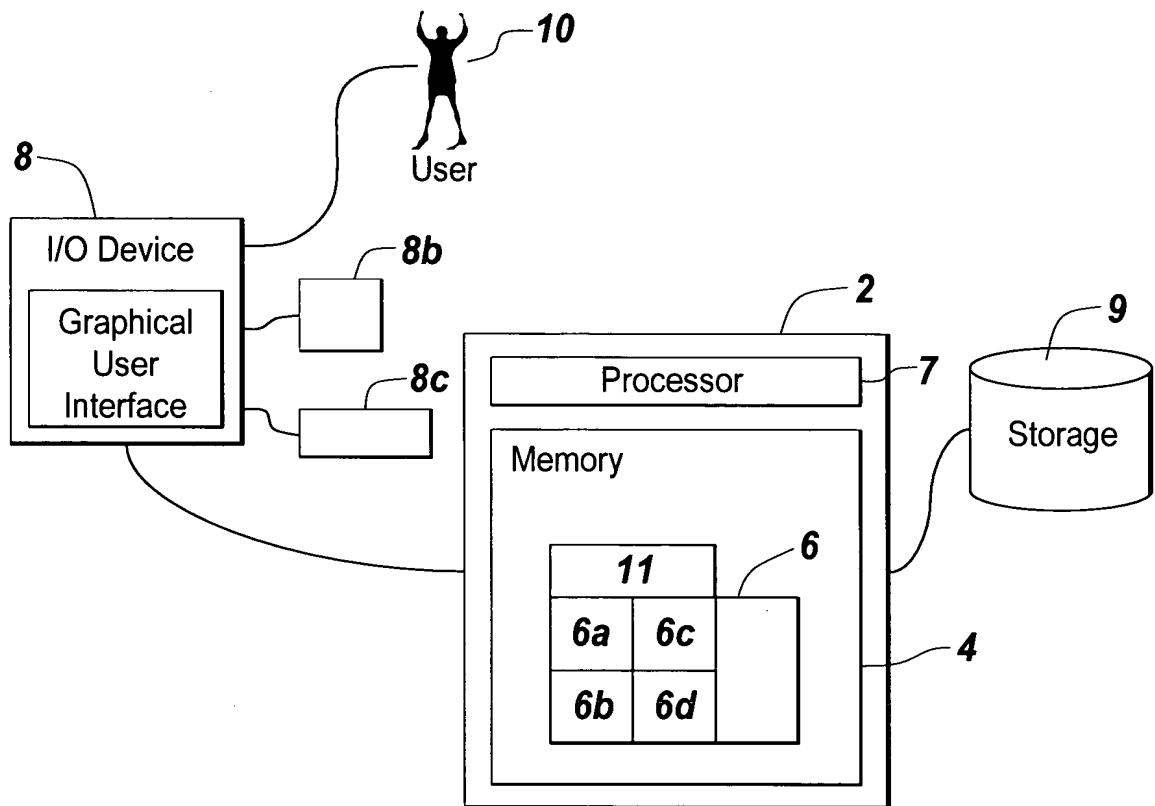
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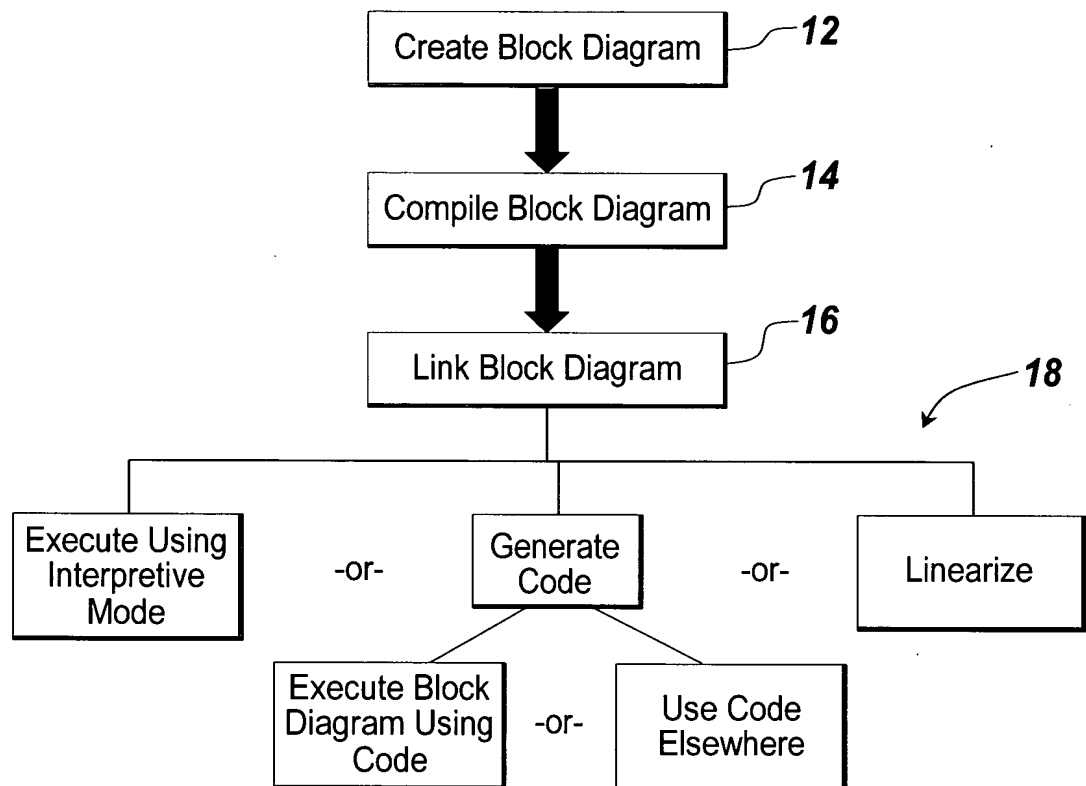
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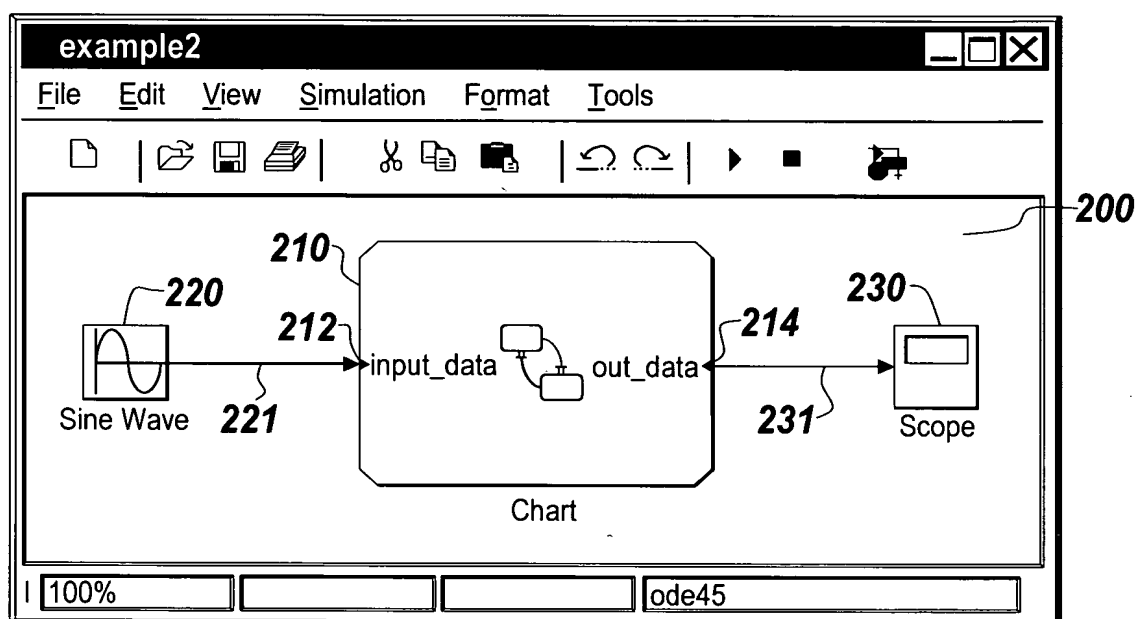
*Fig. 1A*

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*Fig. 1B*

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*Fig. 2*

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310

320

300

**Block Properties: Product**

General Block Annotation Callbacks 330

Information

General block properties.  
Description: text field that is generally used for saving comments about the block.  
Priority: specifies the block's sequencing during execution relative to other blocks with priorities in the same window.  
Tag: a general text field as label which is saved with the block.

Description: 312

Priority: 314

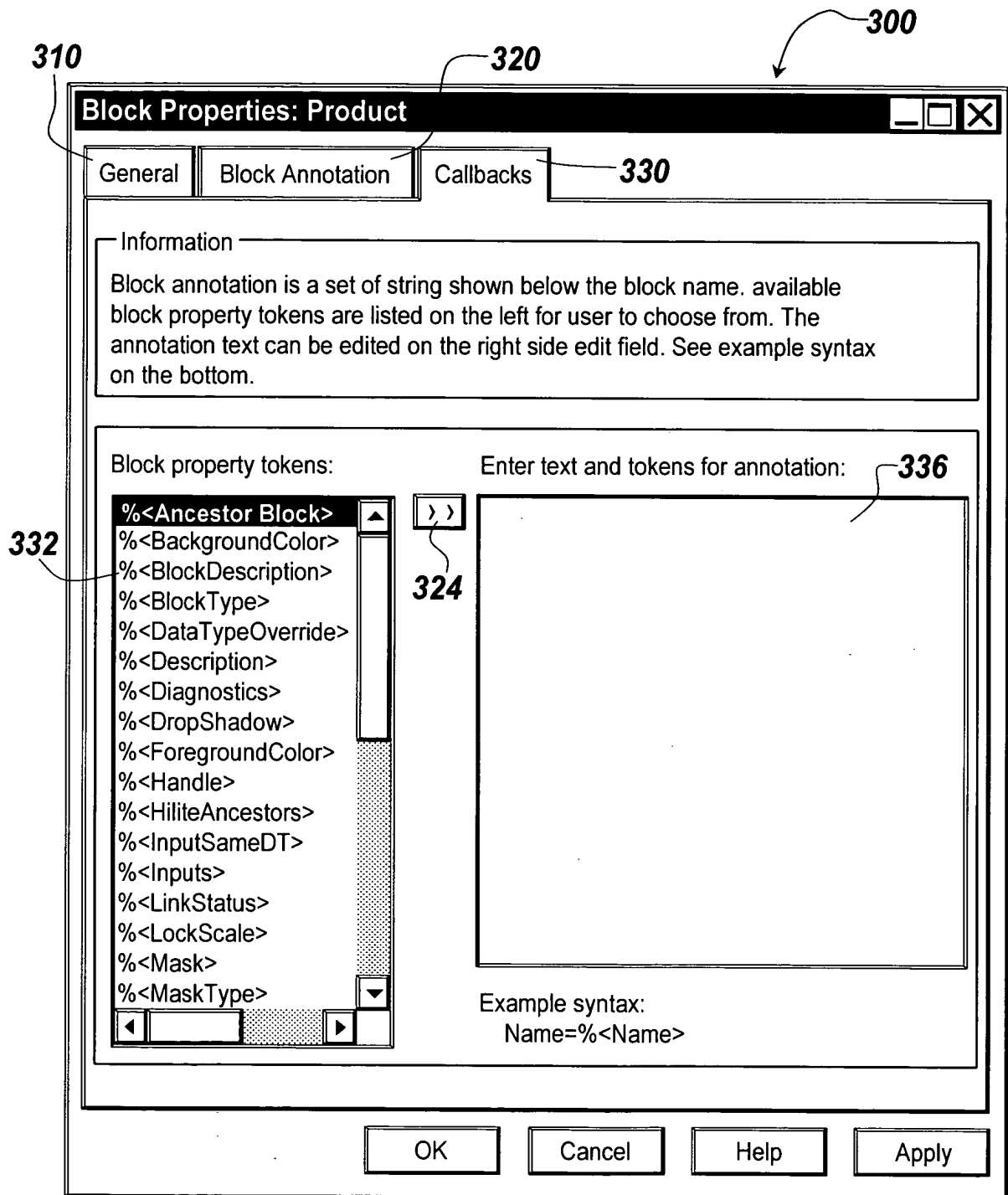
Tag: 306

Code Preview: 318

OK Cancel Help Apply

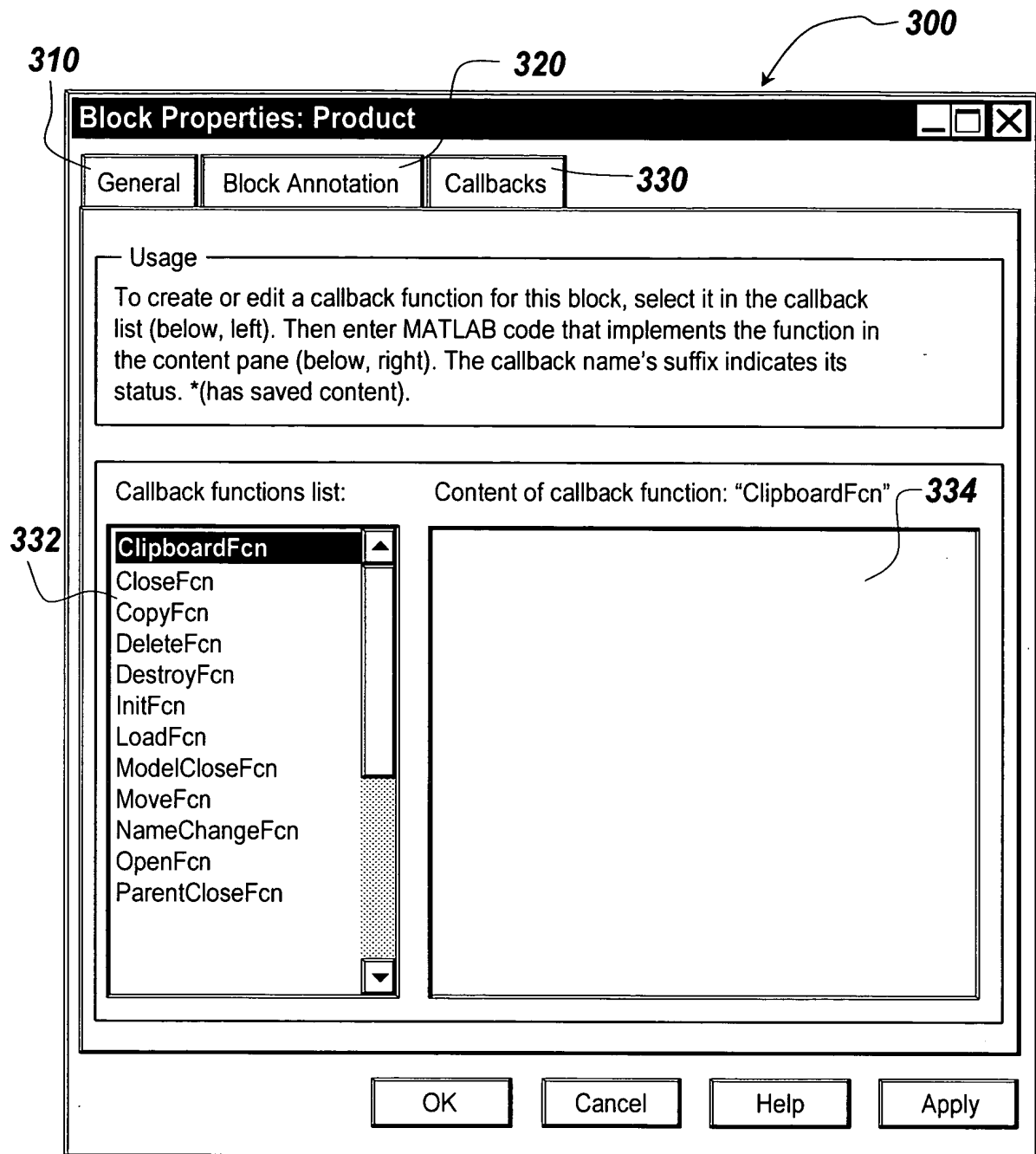
*Fig. 3A*

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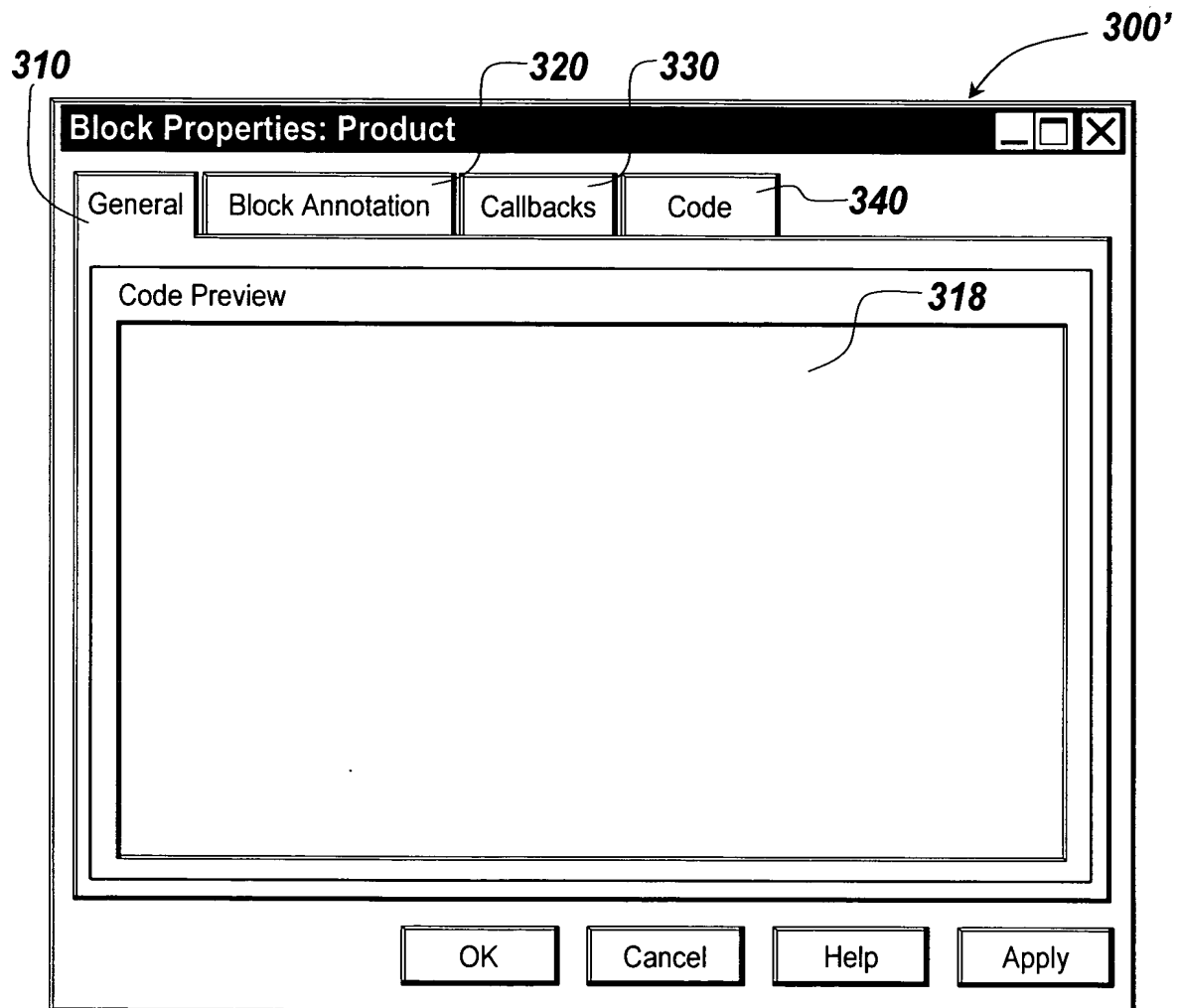
*Fig. 3B*

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*Fig. 3C*

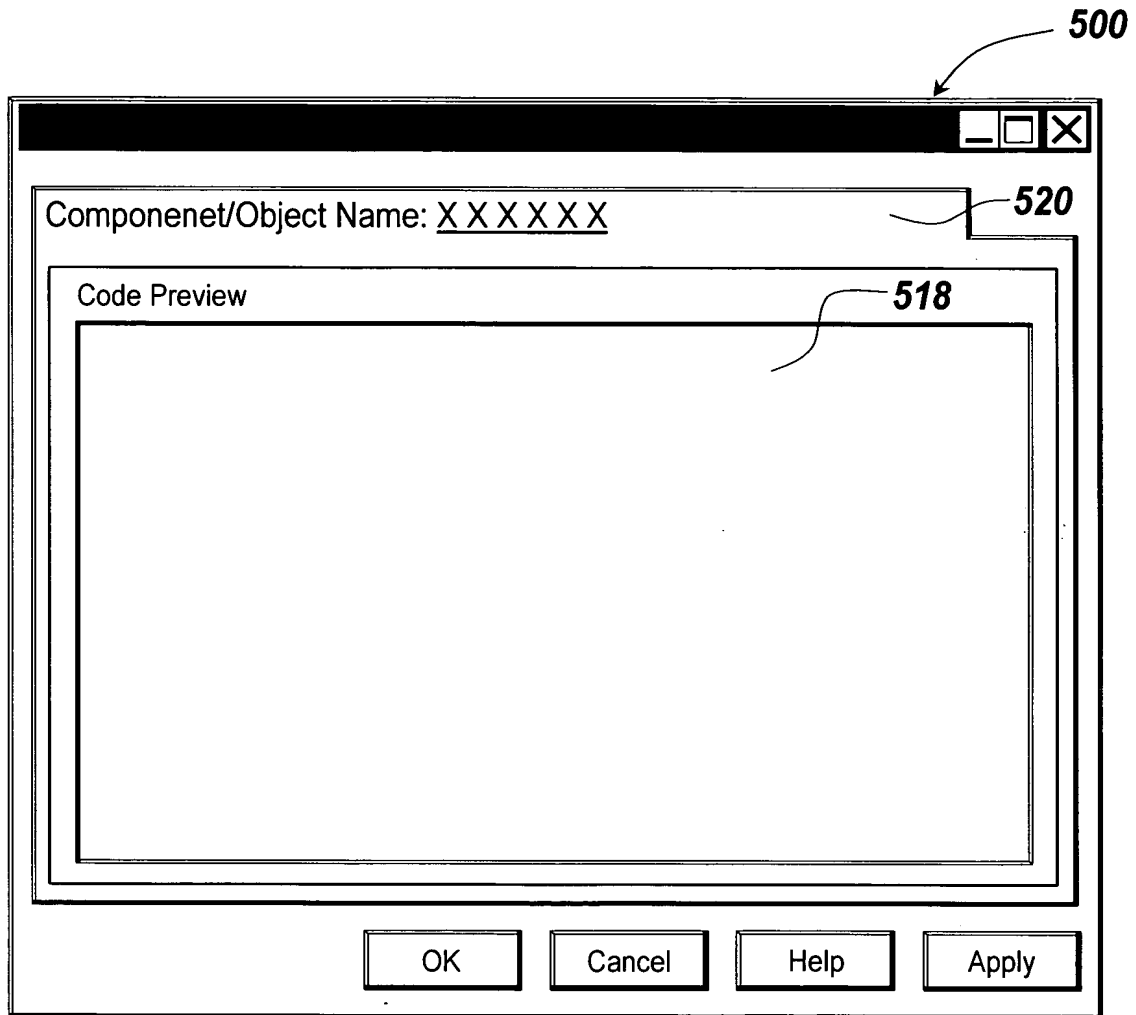
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*Fig. 4*



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*Fig. 5*

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600

**State Properties:**

State code generation options

State name:  612

RTW storage class:  610

RTW storage type qualifier:  620

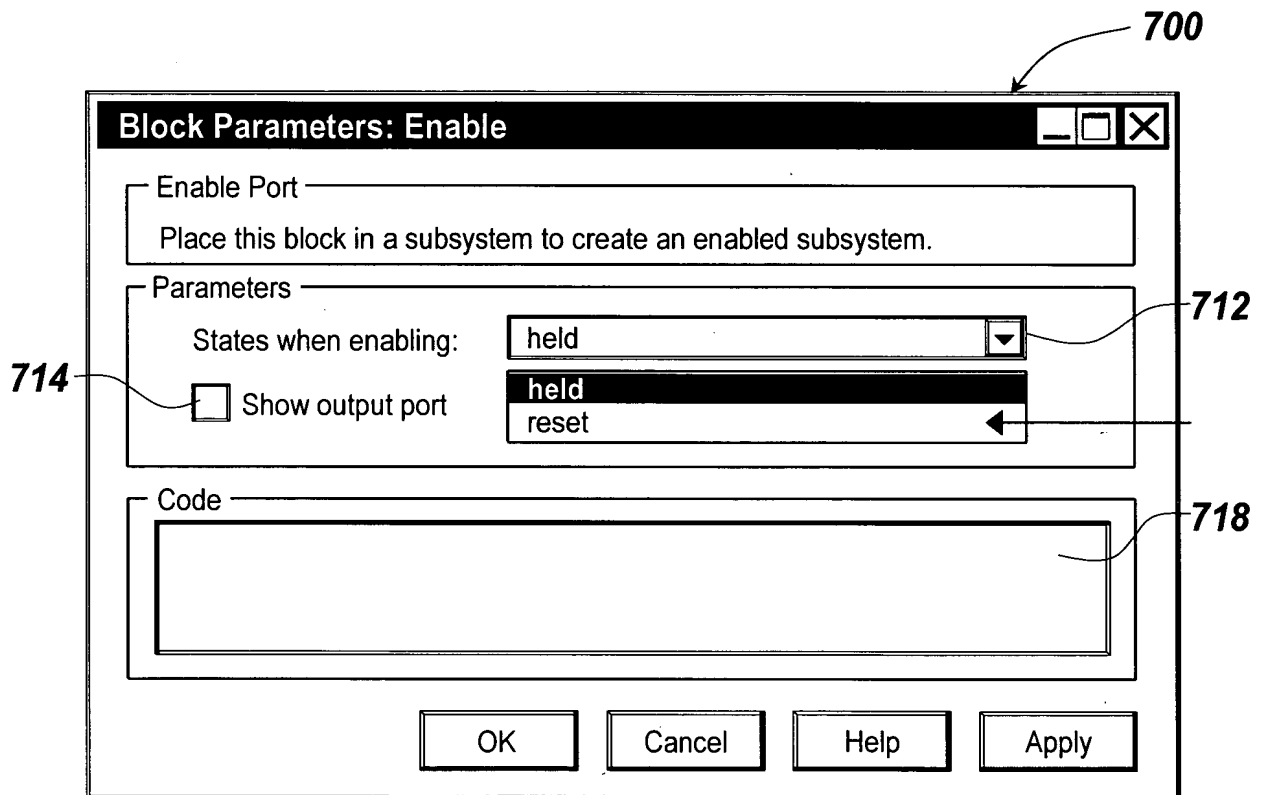
Code Preview Code

618

OK Cancel Help Apply

*Fig. 6*

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*Fig. 7*

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800

**Signal Properties: a** \_ □ ×

Documentation

Signal name: **832** Show propagated signals: on **836** ▼

a

Description: **834**

Document link: **838**

Signal monitoring and code generation options **820**

**822** ☐ Displayable (Test Point) **824**

RTW storage class: Auto ▼

RTW storage type qualifier: **826**

Code Preview **818**

OK Cancel Help Apply

*Fig. 8*

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**Custom Storage Class Designer** [?] [X]

Custom storage classes:

- Const
- ConstVolatile
- MacroDefine**
- SignalStruct
- ParameterStruct

920 930 940 950 960 980

Copy Remove Up Down Validate

Validation result

Last validation succeeded.

Code preview

No header file is specified. By default, data is exported via the generated model.h file.

```
/* Macro defines */  
#define data numeric_value
```

918

General Usage Structured Data Header File Comments Pragmas

Name: SignalStruct

Visibility: ☒ Exported ☐ Memory access: ☒ Direct ☐ Initialization: Macro

925 ☐ Constant 926 ☐ Volatile 928 Qualifier:

File name: user\_custom\_storage\_class\_reg.m

Add path: ☒ Yes - this session only ☐ Location: \\Bat07\\A\\perfect\\matlab\\toolbox\\simulink\\simulink

Load From Directory Save To Directory Save

929 923 924 970

OK Cancel Help Apply

Fig. 9

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Custom Storage Class Designer

Const

ConstVolatile

MacroDefine

SignalStruct

ParameterStruct

Copy

Remove

Up

Down

Validate

General

Usage

Structured Data

Header File

Comments

Pragmas

920

930

940

950

960

980

929

923

924

925

926

928

SignalStruct

Visibility: Exported

Memory access: Direct

Initialization: Static

Constant

Qualifier:

File name: user\_custom\_storage\_class\_reg.m

Add path: Yes - this session only

Location: \\Bat07A\perfect\matlab\toolbox\simulink\simulink

Load From Directory

Save To Directory

Save

Validation result

Last validation succeeded.

Code preview

No header file is specified. By default, data is exported via the generated model.h file.

/\* Constants \*/

extern const datatype dataname(dimension);

/\* Constants \*/

const datatype dataname(dimension) "" (...);

OK

Cancel

Help

Apply

Fig. 10

900'

**Block Parameters: Add** ? \_ X

Sum

Add or subtract inputs. Specify one of the following:

a) string containing + or - for each input port, | for spacer between ports (e.g. +++|++)  
 b) scalar > = 1. A value > 1 sums all inputs; 1 sums elements of a single input vector

Main Signal data types

☐ Require all inputs to have some data type

Output data type mode: Inherit via internal rule

Round integer calculations toward: Floor

☐ Saturate on integer overflow

Code Preview

$y = u1 + u2;$

OK Cancel Help Apply

Fig. 11A

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1100

**Block Parameters: Add** ? \_ X

Sum

Add or subtract inputs. Specify one of the following:  
a) string containing + or - for each input port, | for spacer between ports (e.g. +++|++)  
b) scalar > = 1. A value > 1 sums all inputs; 1 sums elements of a single input vector

Main Signal data types

☐ Require all inputs to have same data type

Output data type mode: Inherit via internal rule

Round integer calculations toward: Floor

☒ Saturate on integer overflow

1118

Code Preview

```
temp = ul + u2;
if ((ul >= 0) && (temp < 0)) {
    temp = MAX_int8_T;
} else if ((ul < 0) && (temp >= 0)) {
    temp = MIN_int8_T;
}
y = temp
```

1120

OK Cancel Help Apply

Fig. 11B



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1100

**Block Parameters: Add** ? \_ □ X

Sum

Add or subtract inputs. Specify one of the following:  
 a) string containing + or - for each input port, | for spacer between ports (e.g. +++|++)  
 b) scalar > = 1. A value > 1 sums all inputs; 1 sums elements of a single input vector

Main Signal data types

☐ Require all inputs to have same data type

Output data type mode: Inherit via internal rule

Round integer calculations toward: Floor

☒ Saturate on integer overflow

1118

Code Preview

```
{
  int16_T castIn;
  rtb_Add_o = untitled_U.In1;
  /* multiply input by slope correction and cast to output*/
  MUL_S16_S16_S16_SR20(castIn,untitled_U.In2,5243);
  Accum_POS_S16_S16_SAT(rtb_Add_o,castIn);
}
```

1120

OK Cancel Help Apply

Fig. 11C

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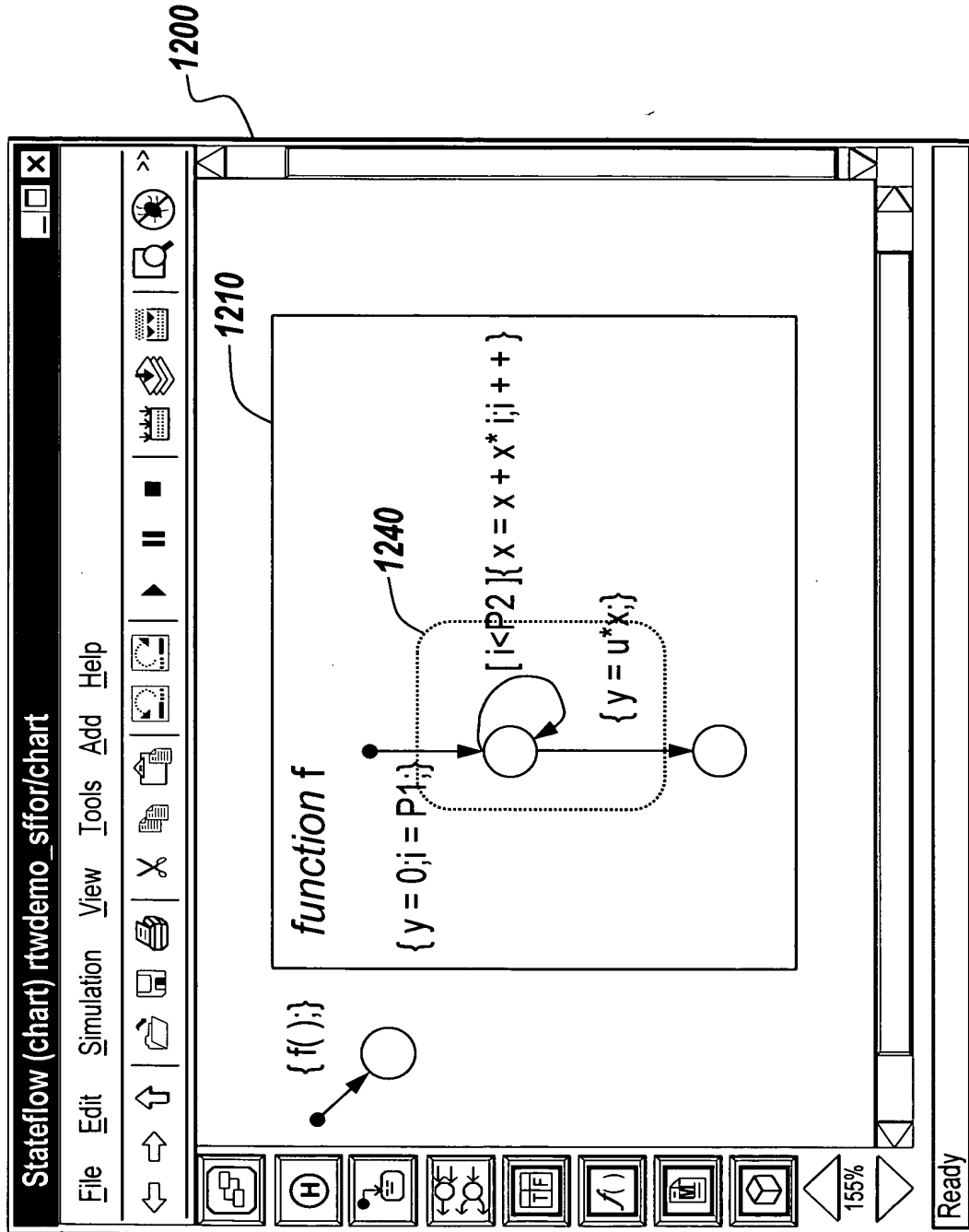


Fig. 12